

[Title of the Document] ABSTRACT

There is provided an intake air amount control system for an internal combustion engine, which controls the amount of intake air by executing both cam phase control and valve lift control, and is capable of enhancing response and accuracy of the intake air amount control, while avoiding interaction between the cam phase control and the valve lift control. In the intake air amount control system 1, an ECU 2 controls the amount of intake air according to a target valve lift Liftin_cmd and a target cam phase Cain_cmd. The Liftin_cmd and Cain_cmd are respectively calculated as the sums of master values Liftin_cmd_ms and Cain_cmd_ms for causing an actual intake air amount Gcyl to converge to a target intake air amount Gcyl_cmd, and slave values Liftin_cmd_sl and Cain_cmd_sl set according to the master values Liftin_cmd_ms and Cain_cmd_ms (steps 56 and 64). In a lift master mode, Cain_cmd_ms is set such that Cain_cmd_ms = 0 holds (step 63), and in a phase master mode, Liftin_cmd_ms is set such that Liftin_cmd_ms = 0 holds (step 55).